UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

W. Dale Tanke
Storage Tank Safety Engineer
Division of Petroleum and Chemical Safety
Office of Illinois State Fire Marshal
1035 Stevenson Drive
Springfield, IL 62703-4259

Re: Siphon bars connecting underground storage tanks.

Dear Mr. Tanke:

This is in response to your letter of May 23, 1994 to Gerald Phillips of Region V (copy enclosed), as well as subsequent conversations with Bill Faggart of our office, relating to the use of siphon bars connecting multiple underground petroleum tanks. You expressed concern that siphon bars are a source of leaks in underground storage tank (UST) systems and should thus be required to have leak detection and corrosion protection.

The UST community should be aware that existing leak detection and corrosion protection regulations already address siphon bars as part of UST systems. Under 40 CFR §280.12, an UST system is comprised of an underground storage tank(s), connected underground piping, underground ancillary equipment, and containment system, if any. Owners and operators of new and existing UST systems must provide a method or combination of methods of release detection that can detect a release from any portion of the tank and the connected underground piping that routinely contains product (40 CFR §280.40(a)). Inasmuch as siphon bars routinely contain product, they are regulated as part of the underground piping.

That having been said, the siphon systems you describe operate and are regulated in the same manner as safe suction product dispensing systems. If a hole develops in the siphon bar, the product level in the bar drops to the height of the product in the tank. If the size of the hole is small enough that an air bleeder line can compensate and reestablish the siphon, air (or groundwater) would be pulled into the siphon bar during operation of the pump. When fuel dispensing halts, the vacuum would again be lost and product would return to the tanks. Therefore, for a

properly designed and installed siphon bar, no release detection is required (40 CFR §280.41(b)(2)). As for the issue of releases during filling, note that forced cascading of product due to intentional overfill during fill operations is an improper operating procedure. Transfer operations must be monitored to prevent overfills (40 CFR §280.30(a)).

The federal regulations are also relevant to the corrosion issue you raised. Piping installed since December 22, 1988 that routinely contains regulated substances and is in contact with the ground must be properly designed, constructed, and protected from corrosion (40 CFR §280.20(b)). Effective December 22, 1998, this requirement extends to all UST system piping, no matter when installed. Siphon bars on such systems must therefore be protected from corrosion.

With respect to your concern that inventory control should not be allowed as an acceptable means of leak detection for multiple tank systems connected with siphon bars, we agree that inventory control, alone, is unacceptable. Periodic tightness tests are also required. As you point out in your letter, it is during these tightness tests that problems with siphon bars are often discovered. Further, it should be noted that the federal UST regulations limit the period of time inventory control with tightness testing (ICTT) can be used at all. ICTT can be used on systems installed prior to December 22, 1988 only until December 22, 1998. Systems installed or upgraded to new tank standards after December 22, 1988 can continue to use ICTT for ten years subsequent to the installation or upgrade.

In view of the fact that siphon bars and manifolded tank systems are addressed under existing UST regulations, the Office of Underground Storage Tanks has no plans to impose additional requirements. Of course, state programs are at liberty to develop regulations that are more stringent than the federal regulations. Illinois' own decision to disallow the use of siphon bars is one such example.

Thank you for your input on this technical issue. I hope that this letter is helpful in allaying your concerns.

Sincerely,

Lisa Lund, Acting Director
Office of Underground Storage Tanks

Enclosure

cc: UST/LUST Regional Program Managers
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Robert Greaves, Region III
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